

# **NOTIFICATION OF ADDENDUM**

## **ADDENDUM NO. 1**

**DATED 2/23/2006**

<b>Control</b>	<b>0598-01-075</b>
<b>Project</b>	<b>NH 2006(355)</b>
<b>Highway</b>	<b>SH 288</b>
<b>County</b>	<b>HARRIS</b>

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an addendum notification which details the changes and the respective proposal pages which were added and/or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped "This Proposal Issued for Informational Purposes."

You are required to acknowledge receipt of this addendum by entering the date, which appears at the top of this letter on the Addendum Acknowledgement Form, contained in your bid proposal.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

04/99

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: NH 2006(355)

CONTROL: 0598-01-075

COUNTY: HARRIS

LETTING: 03/08/2006

REFERENCE NO: 0221

**PROPOSAL ADDENDUMS**

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☐ PROPOSAL COVER  
☐ BID INSERTS (SH. NO.: )  
☒ GENERAL NOTES (SH. NO.: Sheet F )

☐ SPEC LIST (SH. NO.: )  
☐ SPECIAL PROVISIONS: )  
☐ ADDED:

DELETED:

☐ SPECIAL SPECIFICATIONS:  
☐ ADDED:

DELETED:

☒ OTHER: Plan sheet 19B

DESCRIPTION OF ABOVE CHANGES  
(INCLUDING PLANS SHEET CHANGES)

General Notes      Sheet F, Paragraph regarding Working Days changed. Project  
Working Days will be comuted and charged based on Section  
8.3.A.5. "Calendar Day."

Plan Sheets        Sheet 19B, Change per above statement.

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**GENERAL NOTES:**

**General**

If fixed features require, the governing slopes indicated herein may vary between the limits shown and to the extent determined by the Engineer.

Superelevate the curves to match the existing surface.

Refer to ordinances and regulations of local municipal and county governments and the Texas Commission on Environmental Quality, which may be applicable.

Procure permits and licenses, which are to be issued by the City or County.

Notify the Engineer immediately if discrepancies are discovered in the horizontal control or the benchmark data.

The following standard detail sheet is modified:

Support Brackets For Signs, Walkway & Lights SB(SWL-1) (M) sheet 1 of 2

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted provided they are of equal quality, comply with specifications for this project, and are approved, except for roadway illumination, electrical, and traffic signal items.

The cost for materials, labor, and incidentals to provide for traffic across the roadway and for ingress and egress to private property in accordance with Article 7.7 of the standard specifications is subsidiary to the various bid items. Restore access roadways to their original condition upon completing construction.

Grade street intersections and median openings for surface drainage.

If a foundation is to be placed where a riprap surface or an asphalt concrete surface presently exists, use caution in breaking out the existing surface for placement. Break out no greater area than is required to place the foundation. After placing the foundation, wrap the periphery with 0.5 in. pre-molded mastic expansion joint. Then replace the remaining portion of the broken out surface with Class A or Class C concrete or cold mix asphalt concrete to the exact slope, pattern, and thickness of the existing riprap or asphalt. Payment for breaking out the existing surface, wrapping the foundation, and replacing the surface is subsidiary to the various bid items.

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The lengths of the posts for ground mounted signs are approximate. Verify the lengths before ordering these materials to meet the existing field conditions and to conform to sign minimum mounting heights shown in the plans.

Furnish aluminum Type A signs instead of plywood signs for signs shown on the "Summary of Small Signs" sheet.

Stencil the National Bridge Inventory (NBI) number on each existing bridge shown on these plans. The NBI number is shown above the title block for each bridge layout.

Before use on this project, provide seven legible prints of each shop drawing of the fabricated items to the Engineer for approval. Submit required shop drawings to the Area or Project Engineer's office for review and distribution.

### **General: Site Management**

Mark stations every 100-ft. and maintain the markings for the project duration. Remove the station markings at the completion of the project. This work is subsidiary to the various bid items.

Do not mix or store materials, or store or repair equipment, on top of concrete pavement or bridge decks, unless authorized by the Engineer. Permission will be granted to store materials on surfaces if no damage or discoloration will result.

Personal vehicles of employees are not permitted to park within the right-of-way, including sections closed to public traffic. Employees may park on the right-of-way at the Contractor's office, equipment, and materials storage yard sites.

Assume ownership of debris and dispose of at an approved location. Do not dispose of debris on private property, unless approved in writing by the District Engineer.

Control the dust caused by construction operations. For sweeping the base material in preparation for laying asphalt and for sweeping the finished concrete pavement, use one of the following types of sweepers or equal:

TRICYCLE TYPE	TRUCK TYPE - 4 WHEEL
WAYNE SERIES 900	M-B CRUISER II
ELGIN WHITE WING	WAYNE MODEL 945
ELGIN PELICAN	MOBILE TE-3
	MOBILE TE-4
	MURPHY 4042

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**General: Traffic Control and Construction**

When design details are not shown on the plans, provide signs and arrows conforming to the latest *Standard Highway Sign Designs for Texas* manual.

**General: Utilities**

The approximate locations of known underground utilities are not shown in the plans. Before excavating near existing utilities, contact the utility companies or the utility coordinating committee for exact locations to prevent damage or interference with present facilities. Notify the utility coordinating committee and the Texas One-Call System at the following numbers:

Houston Metropolitan Area (HMA) 713-223-4567  
Outside HMA, toll-free 1-800-245-4545

This action does not relieve the Contractor of the responsibilities under the terms of the Contract on the plans and specifications. Repair damage caused by the Contractor's operations at no expense to the Department; restore the facilities to service in a timely manner.

Approximate locations of the Department's fiber optics lines are not shown on the plans. Before excavating near fiber optics lines, contact Mr. Doug Vanover of the Houston District Traffic office at 713-802-5661 to schedule marking these lines on the ground. Use caution if working in these areas to avoid damaging or interfering with existing facilities.

Notify the Engineer at least 48 hours before constructing junction boxes at storm drain and utility intersections.

Install or remove poles and luminaires located near overhead or underground electrical lines using established industry and utility safety practices. Consult the appropriate utility company before beginning such work.

If overhead or underground power lines need to be de-energized, contact the electrical service provider to perform this work. Costs associated with de-energizing the power lines or other protective measures required are at no expense to the Department.

If working near power lines, comply with the appropriate sections of Texas State Law and Federal Regulations relating to the type of work involved.

**General: CTMS**

Locate all underground utilities within the limits of the project. Provide all equipment necessary for locating the utilities; locate and mark the utilities prior to doing any earthwork in the area. This work is incidental to the various bid items. Any damages done to any existing underground utilities will be at no cost to the Department.

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Before excavating near existing utilities, contact the utility companies or the utility coordinating committee for exact locations to prevent damage or interference with present facilities. Notify the utility coordinating committee and the Texas One-Call System at the following numbers:

Houston Metropolitan Area (713-223-4567)  
Outside HMA, Toll Free (1-800-245-4545)

Coordinate the sequence of construction and Traffic Control Plan with any adjacent construction projects to insure the uninterrupted flow of traffic.

Be aware that an operational Computerized Transportation Management System exists within the limits of this project and that the system remains operational throughout construction. Repair any damage to the system within (8) hours of occurrence at no cost to the Department. In the event of system damage, notify TxDOT maintenance (Mr. Doug Vanover at 713-802-5661) within one hour of occurrence. Failure on the part of the Contractor to repair damage to the main fiber optic cable and CCTV cable trunk lines, which convey all corridor information to TranStar, will result in the Contractor being billed for the full cost of emergency repairs.

Approximate locations of the Department's fiber optic lines are shown in the plans. Before excavating near fiber optics lines, contact Mr. Doug Vanover of the Houston District Traffic Engineering office at 713-802-5661 to schedule marking these lines on the ground. Use caution if working in these areas to avoid damaging or interfering with existing facilities.

Ensure the interconnection of new equipment to the existing system does not interfere with the operation of remaining system components. Ensure the system remains operational between the hours of 6:00 a.m. Monday and 12:00 a.m. (midnight) Saturday.

Perform all work to be done on cables during weekends only.

The Contractor will not be allowed to interrupt system operation without coordination with TxDOT operations personnel at Houston TranStar.

Test all circuits clear of faults, grounds and open circuits.

Test each wire of each cable or conductor after installation by the Contractor. Any incomplete circuit or any damage to any wire or any cable will be cause for immediate rejection of the entire cable being tested. Remove and replace the entire cable at no cost to the Department, and test the replacement cable after installation.

Reference to manufacturer's trade name or catalog numbers are for the purpose of identification, only, and the Contractor will be permitted to furnish like materials of other manufacturers provided they are of equal quality and comply with specifications for this project and are approved by the Engineer.

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Perform all electrical work in conformance with the *National Electrical Code* (NEC).

**ITEM 5: CONTROL OF THE WORK**

The responsibility for the construction surveying on this Contract will be in accordance with Article 5.6.B, "Method B."

**ITEM 7: LEGAL RELATIONS AND RESPONSIBILITIES**

This project does not require a U.S. Army Corps of Engineers (USACE) Section 404 Permit before letting, but if a permit is needed during construction, assume responsibility for preparing the permit application. Submit the permit application to the Department's District Environmental Section for approval. Once the permit application is approved, the Department will submit it to the USACE. Assume responsibility for the requested revisions, in coordination with the Department's District Environmental Section.

**ITEM 8: PROSECUTION AND PROGRESS**

The following are descriptions of milestones established by the Engineer to minimize inconvenience to the traveling public and restore traffic to its final configuration in a timely manner.

**FAILURE TO COMPLETE WORK ON TIME**

<b>Nº</b>	<b>MILESTONES</b>	<b>DAILY USER COST</b>	<b>TYPE OF MILESTONE</b>	<b>BEGIN</b>	<b>ENDS</b>	<b>NUMBER OF DAYS</b>
1	SUBSTANTIAL COMPLETION OVERALL	\$16,000.00	FIXED	BEGINNING CONSTRUCTION	COMPLETION OVERALL	58

The road-user cost liquidated damages shall be \$16,000 per calendar day for the remaining phases of construction that do not have specific milestones until the project is substantially complete. After the project is substantially complete, the liquidated damages become those based on Contract administration costs. Liquidated damages shall be in effect until the completion of the project. These are assessed as defined in the Special Provision to Item 8, which modifies Article 8.5.

The project duration is 58 days.

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**CREDIT FOR COMPLETION OF WORK AHEAD OF TIME**

<b>MILESTONE №</b>	<b>ROAD USER COST/DAY</b>	<b>MAXIMUM NUMBER OF DAYS</b>	<b>MAXIMUM TOTAL AMOUNT/MILESTONE</b>
1	\$16,000.00	10	\$160,000.00

The Contractor shall receive a credit in the amount of \$16,000 per calendar day for the described Milestone 1. The maximum number of calendar days for computing the credit shall be 10 days. The maximum amount of incentive shall be \$160,000.

**Schedule of Liquidated Damages or Incentive Bonus for Early Completion****Milestone №.1**

Liquidated Damages	\$16,000 (Sixteen Thousand and 00 Dollars/Day)
Incentive Bonus	\$16,000 (Sixteen Thousand and 00 Dollars/Day)

Prepare, maintain, and submit for approval, a Critical Path Method (CPM) project schedule using the latest version available at the time the Contract is awarded, of Primavera® Project Planner computer software.

The Department will supply bidders, upon written request, one electronic copy of the time determination schedule. The time determination schedule provided is for informational use only and is not intended for bidding or construction purposes.

The Department will not adjust the number of days for the project and milestones, if any, due to differences in opinion regarding any assumptions made in the preparation of the schedule or for errors, omissions, or discrepancies found in the time determination schedule.

Working days will be computed and charged based on Section 8.3.A.5, "Calendar Day."

Provide a virus-free computer diskette containing the Primavera® construction schedule.

The Lane Closure Assessment Fee is \$ 2,500. This fee applies to the Contractor for closures or obstructions that overlap into restricted hour traffic for each hour or portion thereof, per lane, regardless of the length of lane closure or obstruction. For Restricted Hours subject to Lane Assessment Fee refer to the Item, "Barricades, Signs, and Traffic Handling."

Coordinate the sequence of construction and the Traffic Control Plan with adjacent construction projects to ensure an uninterrupted flow of traffic.



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**ITEM 104: REMOVING CONCRETE**

Removing concrete curb is paid as a separate bid item if existing pavement on which it rests is not removed at the same time.

Saw cutting is subsidiary to this bid item.

**ITEM 318: HOT ASPHALT-RUBBER SURFACE TREATMENTS**

Place this Item simultaneously with Item 342 during the same night's operation. Do not allow traffic to travel on the surface treatment. Cover the surface treatment immediately, after placement with Item 342.

Placing one-course surface treatment is limited to the period of April 1 to October 31, inclusive. Obtain written approval if weather conditions warrant an extension of the placement period.

The asphalt application rate shown on the "Basis of Estimate" is an average rate for calculating asphalt quantities.

**ITEM 340: DENSE-GRADED HOT MIX ASPHALT (METHOD)**

RAP materials salvaged from other approved state projects may be used to compose up to 10 percent of the final riding surface course. All other layers may contain up to 20% RAP. RAP stockpiles intended for this use must be approved by the Area Engineer prior to their use.

Dilution of tack coat is not allowed.

**ITEM 341: DENSE-GRADED HOT MIX ASPHALT (OC/OA)**

Taper the asphalt concrete pavement at the beginning and ending points.

Use a maximum 6H:1V slope for the asphalt concrete pavement edge.

Where the 6H:1V ACP edge taper extends over onto the unsurfaced shoulders, blade off the loose existing shoulder material to provide a solid base for the outside taper edge. After placing the ACP overlay, blade this material back against the edge taper. This work is subsidiary to the various bid items.

The stockpile will be the point of sampling of coarse aggregate for Test Method Tex-217-F (Part II, Decantation).

Place the asphalt concrete pavement in courses as shown on the typical sections.

Do not use petroleum-based solvents in the beds of hot-mix asphalt delivery vehicles.

RAP materials salvaged from other approved state projects may be used to compose up to 10 percent of the final riding surface course. All other layers may contain up to 20% RAP. RAP stockpiles intended for this use must be approved by the Area Engineer prior to their use.

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Dilution of tack coat is not allowed.

Do not use Surface Aggregate Classification (SAC) C for this project.

For determining the asphalt content, only ignition ovens will be allowed.

**ITEM 342 PERMEABLE FRICTION COURSE (PFC)**

Provide antistripping agent, unless directed otherwise by the Engineer.

For the tack coat, use PG 58-22 or CSSI-H OR SS1-H.

Taper the asphalt concrete pavement at the beginning and ending points.

**ITEM 344 PERFORMANCE-DESIGNED MIXTURES**

For the tack coat, use PG 58-22. Taper the asphalt concrete pavement at the beginning and ending points.

Use a maximum 6H:1V slope for the asphalt concrete pavement edge outside the shoulders.

Where the 6H:1V ACP edge taper extends over onto the unsurfaced shoulders, blade off the loose existing shoulder material to provide a solid base for the outside taper edge. After placing the ACP overlay, blade this material back against the edge taper. This work is subsidiary to the various bid items.

**ITEM 354: PLANING AND TEXTURING PAVEMENT**

The Contractor will only mill at night.

The entire asphalt concrete pavement (ACP) materials removed from within this project are to be stockpiled the Department's Maintenance Yard located at 702 FM 1959, Houston, Texas, 77034 as directed by Mitch McCarty at 281-464-5540.

**ITEM 356: FABRIC UNDERSEAL**

The application rate of the asphalt shall be as recommended by the fabric underseal manufacturer or as directed.

**ITEM 361: FULL-DEPTH REPAIR OF CONCRETE PAVEMENT**

Locations for full-depth repair to be marked by the CONTRACTOR and approved by the Engineer prior to commencing work.

For full-depth repair, remove only the quantity of pavement replaceable during the daily allowable work schedule.

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Remove loose subbase material and replace it with concrete. Use a bond breaker, such as a polyethylene sheet, at the interface between the replaced subbase material and the new concrete pavement.

Supply polyethylene fabric on the job site sufficient to cover the area of repair.

Do not place concrete placement if impending weather may result in rainfall or low temperatures that may impair the quality of the finished work.

Repair portions of the concrete pavement surfaces that are damaged while in a plastic state before those areas receive permanent pavement markings and open to traffic. Perform repairs that are structurally equivalent to and cosmetically uniform with adjacent undamaged areas. Do not repair by grouting onto the surface.

Ready-mix concrete will be permitted, if the equipment and construction methods can produce the desired results. Hand-finishing will be permitted.

Perform saw cutting as shown on the plans in accordance with Article 360.4.J, "Sawing Joints." This saw cutting is subsidiary to this Item.

**ITEM 420: CONCRETE STRUCTURES**

Unless otherwise noted, use Class C concrete with an ordinary surface finish for signal, lighting, or sign structure foundations.

**ITEMS 421: HYDRAULIC CEMENT CONCRETE**

Transport test cylinders to the Houston District Laboratory located at 7721 Washington Avenue in Houston, Texas. Transporting the test cylinders is subsidiary to the various bid items.

**ITEM 479: ADJUSTING MANHOLES AND INLETS**

Adjust the final elevation of inlets to the finished elevation of ACP overlay.

**ITEM 502: BARRICADES, SIGNS, AND TRAFFIC HANDLING**

Plastic drums/vertical panel spacing on this project shall not exceed 60 ft.

A Police Officer will be required at intersections to control signal lights, to allow for longer green signal for freeway traffic. This will allow for a larger amount of traffic to flow through intersections.

Use a traffic control plan for handling traffic through the various phases of construction. Follow the phasing sequence, unless otherwise agreed upon by the Area Engineer and the Project Manager. Ensure this plan conforms to the latest *Texas Manual on Uniform Traffic Control Devices for Streets and Highways* and the latest Barricade and Construction (BC) standard sheets.

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Submit changes to the Traffic Control Plan to the Area Engineer. Provide a layout showing the construction phasing, signs, and striping for changes to the original Traffic Control Plan.

Furnish and maintain the barricades and warning signs, including the necessary temporary and portable traffic control devices, during the various phases of construction. Place and construct these barricades and warning signs in accordance with the latest *Texas Manual on Uniform Traffic Control Devices for Streets and Highways* for typical construction layouts.

Cover work zone signs when work related to the signs is not in progress, or when any hazard related to the signs no longer exists.

Erect temporary signs when exit ramps are closed or moved to new locations during construction.

Keep the delineation devices, signs, and pavement markings clean. This work is subsidiary to the Item, "Barricades, Signs, and Traffic Handling."

Other contractors may operate within and adjacent to the limits of this project. Become familiar with the plans for adjacent contracts or projects and coordinate this project's work to minimize interruptions or delays to the traveling public, this project, and the adjacent projects.

If a section is not complete before the end of the workday, pull back the base material to the existing pavement edge on a 6H: 1V slope. Edge drop-offs during the hours of darkness are not permitted.

Before detouring traffic onto the mainlane shoulders, remove dirt, debris, vegetation, and other deleterious material from the surface of the shoulders. Appropriately sign the detour in an approved manner. This work is subsidiary to the various bid items.

Coordinate and correspond with the Department through the Area Engineer or representative. Post static message boards a minimum of 7 days in advance of major traffic pattern changes such as lane closures, ramp closures, and roadway closures. The Area Engineer will notify the public information office a minimum of 7 days in advance of major traffic pattern changes.

Place the static message boards as shown on the plans a minimum of 7 days before major traffic pattern changes, as described above.

Furnish the static message boards shown on the Traffic Control Plan or those necessary for major traffic pattern changes. The static message board standard is included in the plans. The static message board is subsidiary to the Item, "Barricades, Signs, and Traffic Handling."

Cover or remove the permanent signs and construction signs that are incorrect or do not apply to the current situation for a particular phase.

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Do not mount signs on drums or barricades, except those listed in the latest Barricades and Construction standard sheets.

Use traffic cones for daytime work, only. Replace the cones with plastic drums during nighttime hours.

Place positive barriers to protect drop-off conditions greater than 2-ft. within the clear zone that remain overnight.

Use shadow vehicles with Truck Mounted Attenuators (TMA) for lane closures during construction. Do not reduce the existing number of lanes open to traffic, except as shown on the following time schedule:

### 1-LANE/2-LANE AND FULL CLOSURE

DAY	DAYTIME CLOSURE HOURS	NIGHTTIME CLOSURE HOURS	RESTRICTED HOURS SUBJECT TO LANE ASSESSMENT FEE
MONDAY	N/A	12 AM-5:00 AM 9:00 PM- 12 AM	5:00 AM - 9:00 PM
TUESDAY	N/A	12 AM-5:00 AM 9:00 PM- 12 AM	5:00 AM - 9:00 PM
WEDNESDAY	N/A	12 AM-5:00 AM 9:00 PM- 12 AM	5:00 AM - 9:00 PM
THURSDAY	N/A	12 AM-5:00 AM 9:00 PM- 12 AM	5:00 AM - 9:00 PM
FRIDAY	N/A	12 AM-5:00 AM 9:00 PM- 12 AM	5:00 AM - 9:00 PM
SATURDAY	N/A	12 AM-8:00 AM 9:00 PM- 12 AM	8:00 AM – 9:00 PM
SUNDAY	N/A	12 AM-10:00 AM 9:00 PM- 12 AM	10:00 AM – 9:00 PM

The above times are approved for the traffic control conditions listed.

The Area Engineer may approve other closure times if traffic counts warrant.

The Area Engineer may reduce the above times for special events.

Provide full-time, off-duty, uniformed, certified peace officers, as part of traffic control operations. The peace officers must be able to show proof of certification by the Texas Commission on Law Enforcement Officers Standards. The cost of the officers is paid on a Force Account basis.

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Provide 4 portable changeable message signs as shown on the Traffic Control Plan and the Special Specification Item 6078, "Portable Changeable Message Signs." These changeable message signs are subsidiary to the Item, "Barricades, Signs, and Traffic Handling."

**ITEM 504: FIELD OFFICE AND LABORATORY**

A field office for the Engineer will not be required for this project.

Provide basic cellular telephone service and one portable cellular telephone for the Engineer's use for the duration of the project. This Item is subsidiary to the various bid items.

Furnish a Type D structure for the Asphalt Mix Control Laboratory for the Engineer's exclusive use. In addition to the requirements of this Item, "Field Office and Laboratory," ensure this structure has a minimum height of 8 ft. Also, ensure it has a minimum of 400 sq. ft. of gross floor area suitable for permanently located asphalt plants or 200 sq. ft. for temporarily located asphalt plants serving one project. Partition the floor area into a minimum of 2 interconnected rooms, and provide each room with an exterior door and a minimum of 2 windows. Construct the floor of sufficient strength to support the testing equipment and with an impervious covering.

Adequately air-condition the Type D structure and furnish it with a minimum of one desk, three chairs, one file cabinet, a telephone, and one built-in equipment-storage cabinet suitable for storing nuclear equipment. Ensure the cabinet is a minimum of 3-ft. wide by 2-ft. deep by 3-ft. high and has a secure lock. Provide the structure with a 240-volt electrical service entrance. Use a licensed electrician to determine the service size and service entrance conductors. Provide a minimum service of four 120-volt circuits with 20-amp breakers, and a maximum of 2 grounded convenience outlets per circuit and a minimum of two 220-volt ovens with vents to the outside. Provide a structure with a minimum of two convenience outlets per wall and a utility sink with an adequate, clean potable water supply for testing. Do not use space heaters to heat the structure. Use support blocks for the portable structures, tie them down, and securely attach them to the ground.

Instead of meeting the requirements under this Item for asphalt content by extraction, provide a structure meeting the following requirements: Adequately power ventilate the room for the ignition oven. Provide a NEMA 6-50R (208/240 volt, 50-amp) outlet within 2.25 ft. of the ignition oven location and an independent exhaust outlet to the outside located a maximum of 8 ft. from the oven. Provide a level, sturdy, and fireproof surface for the ignition oven with a minimum of 6 in. clearance between the furnace and other vertical surfaces.

If an asphalt mix plant is located at the project site, provide a Type D structure with the dimensions of a Type C structure, at the project site to perform the asphalt mix quality control tests.

If a commercial source is used for the asphalt mix, provide a Type D structure with the dimensions of a Type C structure, at the commercial source site to perform the asphalt mix quality control tests.

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The above requirements are subsidiary to the various bid items.

Assume ownership of temporary chain-link security fences.

**ITEM 506: TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS**

The Storm Water Pollution Prevention Plan (SW3P) consists of temporary erosion control measures needed and provided for under this item. This work is paid by "Force Account" for this Item. Since the disturbed area is less than 5 acres, a "Notice of Intent" (NOI) is not required.

**ITEM 512: PORTABLE CONCRETE TRAFFIC BARRIER**

**ITEM 529: CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER**

An air-entraining admixture is not required.

For concrete curbs, use Grade 7 aggregate conforming to Article 421.2 of the standard specification item, "Hydraulic Cement Concrete."

**ITEM 540: METAL BEAM GUARD FENCE**

Painting the timber posts is not required.

Use timber posts for galvanized steel metal beam guard fence, except for anchorage at turned down ends. Turn down free ends of galvanized steel metal beam guard fence, unless otherwise shown on the plans.

Furnish and install wood blocks between the rail elements and the timber posts as detailed on the plans. These block-outs are subsidiary to this Item.

The quantity of the metal beam guard fence is subject to change.

Provide a mow strip as shown on the plans, at metal beam guard fence locations. This work is subsidiary to this Item.

**ITEM 542: REMOVING METAL BEAM GUARD FENCE**

Remove and assume ownership of unsalvageable metal beam guard fence rail elements and posts.

Replace removed wood posts, which are unusable because of damage by the Contractor, at no expense to the Department.

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**ITEM 544: GUARDRAIL END TREATMENTS****ITEM 585: RIDE QUALITY FOR PAVEMENT SURFACES**

Pay Schedule 2 shall apply.

**ITEM 636: ALUMINUM SIGNS**

When design details are not shown on the plans, provide signs and arrows conforming to the latest *Standard Highway Sign Designs for Texas* manual.

**ITEM 644: SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES**

Sign locations shown on the plans are approximate. Before placing, obtain approval and stake the exact locations for these signs.

Use the Texas Universal Triangular Slip Base with the concrete foundation for small ground mounted signs, unless otherwise shown in the plans.

Remove existing street name signs from existing stop signs and re-install them above the new stop signs. Removing and re-installing existing street name signs is subsidiary to the Item, 644, "Small Roadside Sign Supports and Assemblies."

When design details are not shown on the plans, provide signs and arrows conforming to the latest *Standard Highway Sign Designs for Texas* manual.

Replace existing signs that are damaged during construction at no expense to the Department.

**ITEM 662: WORK ZONE PAVEMENT MARKINGS**

At the end of each day's work, mark roadways that remain open to traffic during construction operations with standard pavement markings, in accordance with the latest *Texas Manual on Uniform Traffic Control Devices for Streets and Highways*.

Using raised markers for removable work zone pavement markings on final concrete surfaces is optional.

Do not use raised pavement markers as optional work zone pavement markings on final asphalt surfaces.

For transition lane lines and detour lane lines, use raised pavement markers as shown for solid lines on the latest Barricade and Construction standard sheet for "Work Zone Pavement Marking Details."

**ITEM 662: WORK ZONE PAVEMENT MARKINGS****ITEM 666: REFLECTORIZED PAVEMENT MARKINGS**

Use a thickness of 0.100 inches (100 mils) for thermoplastic pavement markings, measured to the top of the thermoplastic, not including the exposed glass beads.



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For roadways with asphalt surfaces to be striped with work zone or permanent thermoplastic markings, the Contractor has the option to apply paint and beads markings for a maximum 30-day period until placing the thermoplastic markings, or until starting the succeeding phase of work on the striped area. Maintain the paint and beads markings, at no expense to the Department, until placing the thermoplastic markings or starting the succeeding phase of work on the striped area. The work zone markings, whether paint and beads or thermoplastic, are paid under the Item, "Work Zone Pavement Markings" and the markings are paid for only once for the given phase of construction.

Purchase the traffic paint from the open market.

If the Type II markings become dirty and require cleaning by washing, brushing, compressed air, or other approved methods before applying the Type I thermoplastic markings, this additional cleaning is subsidiary to the Item, "Reflectorized Pavement Markings."

Establish the alignment and layout for work zone striping and permanent striping.

Stripe roadways before opening them to traffic.

Place pavement markings under these items in accordance with details shown on the plans, the latest *Texas Manual on Uniform Traffic Control Devices for Streets and Highways*, or as directed.

**ITEM 672: RAISED PAVEMENT MARKERS**

If other operations are complete on the project and if the curing time period is not yet elapsed, the Contract time will be suspended until the curing is done.

Before placing the raised pavement markers on concrete pavement, blast clean the surface using an abrasive-blasting medium. This work is subsidiary to the Item, "Raised Pavement Markers."

Provide epoxy adhesive that is machine-mixed or nozzle-mixed and dispensed. Equip the machine or nozzle with a mechanism to ensure positive mix measurement control.

**ITEM 677: ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS**

Remove existing pavement markings on concrete or asphalt surfaces by flail milling or as directed.

**ITEM 678: PAVEMENT SURFACE PREPARATION FOR MARKINGS**

Do not blast clean asphalt concrete pavement. Clean asphalt concrete pavement as required under the applicable specifications or as directed.

On new concrete pavement or on existing concrete pavement when placing a new stripe on a new location, remove all curing compounds and contamination from the pavement surface by flail milling or as directed. In addition, air blast the surface with compressed air just prior to placing the new stripe.

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On existing concrete pavement when placing a new stripe on an existing location, after removing the existing stripe under Item 677, "Eliminating Existing Pavement Markings and Markers," air blast the surface with compressed air just prior to placing the new stripe.

Perform all air blasting with a compressor that is capable of generating air at a minimum of 100 psi using 5/16" or larger hosing for the air blast (equipment should have sufficient capacity to remove contaminants but not damage the pavement surface). Do not clean concrete pavement by grinding.

**ITEM 720: REPAIR OF SPALLING IN CONCRETE PAVEMENT**

The locations of longitudinal construction joints shown on the plans are approximate. Verify in the field before stitching.

**Vehicle Loop Wire Sealant (DMS-6340)**

If the loop sealant supplied by the Contractor is not on the Department's pre-qualified product list, provide a 5-gallon container of loop sealant for testing before applying the sealant.

Refer to the Special Specification Item 6020 in regards to the sealing compound. Provide loop sealant, which complies with DMS-6340.

**Surveillance System Loop Detectors (Item 6020)**

Prior to any work involving loops, notify TxDOT traffic operation personnel at Houston TranStar.

Install the detector loop after the final paving is complete. Any damage to the detector loop during installation will be sufficient cause for rejection of the entire detector loop.

Connect each existing loop to a specific loop lead-in cable and loop amplifier. Connect each new loop to the same loop lead-in cable and loop amplifier as the existing loop that the new loop is intended to replace.

Test the detector loop after installation. Perform all necessary adjustments to the existing loop amplifier for proper loop-detector system operation.

Ensure wire for roadway loop-detectors is №14XHHW as described in the *National Electrical Code*.

Calibrate the loops after completion of detector loop are installed. Provide all necessary adjustments to insure correct traffic speeds are registered by the FTM software. Measure the traffic speeds by using a laser type speed-measuring instrument. The tolerance for the registered speeds (FTM software) versus the measured speeds (laser gun) shall be +/- 5 miles per hour. Coordinate the work with traffic operations personnel.

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Ensure flexible tubing used to encapsulate the detector loop wire is designed to withstand a temperature of 450° F.

Prior to any work involving detector loops, measure the length of the loop lead-in cable between the loop and the amplifier for each loop to be replaced. Install each new loop with the correct number of turns in accordance with the lead-in length chart contained in the plans.

**BASIS OF ESTIMATE**

ITEM	DESCRIPTION	LIMIT AND RATE	UNIT
318	SURFACE TREATMENTS (A-R BINDER)		
	ASPHALT (RUBBER) (8.57 LB/GAL)(0.55 GAL/SY)	1/100 CY/SY	CY
	AGGREGATE	4.7135 LB/SY	TON
341	DENSE-GRADED HOT-MIX ASPHALT (QC/QA)	110 LB/SY-IN.	TON
	ASPHALT	6 % BY WEIGHT	
	AGGREGATE	94 % BY WEIGHT	
342	PERMEABLE FRICTION COURSE (PFC)	95 LB/SY-IN.	TON
	ASPHALT	6 % BY WEIGHT	
	AGGREGATE	94 % BY WEIGHT	
344	PERFORMANCE-DESIGNING MIXTURES	110 LB/SY-IN.	TON
	ASPHALT	6 % BY WEIGHT	
	AGGREGATE	94 % BY WEIGHT	
356	FABRIC UNDER-SEAL		
	ASPHALT BINDER APPLICATION	0.10 GAL/SY	GAL

\* For Contractor's information only (non-pay item).